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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,913	09/05/2000	Werner Opitz	H 3266 PCT/US	2582

7590 07/22/2003
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EXAMINER

SINES, BRIAN J

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 07/22/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/600,913

Applicant(s)

OPITZ ET AL.

Examiner

Brian J. Sines

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/21/2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 15-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 15-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 and 15 – 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beck et al. (U.S. Pat. No. 5,259,960 A) in view of Surjaatmadja et al. (U.S. Pat. No. 5,192,509 A). Regarding claims 1 and 25, Beck et al. teach a process for the determination of the alkalinity of a cleaning bath containing a surfactant, wherein the process comprises the following steps: (a) drawing a sample of specified volume from a cleaning bath; and (b) determining the alkalinity of the sample using an acid-base reaction with an acid (col. 6, lines 7 – 14; col. 14, lines 5 – 34). Beck et al. teach the step of adding one or more replenishing components to the cleaning bath if the result of step (b) above is below a preset value (col. 20, lines 13 – 17). Beck et al. teach that the alkaline cleaning solution can be added and replenished during the process as

necessary (see col. 4, lines 51 – 57). Beck et al. is silent to the specific teaching of providing for an automated process for determining the alkalinity of the cleaning bath. However, Surjaatmadja et al. do teach an apparatus and method for automatic titration. Therefore, it would have been obvious to incorporate the automatic titration method and apparatus, as taught by Surjaatmadja et al., with the process, as taught by Beck et al., since the Courts have held that to provide a mechanical or automatic means to replace manual activity, which accomplishes the same result, is within the ambit of one of ordinary skill in the art. See *In re Venner*, 120 USPQ 192 (CCPA 1958). Regarding claim 15, Beck et al. teach that the samples are filtered to remove solids prior to the step of determining alkalinity (col. 16, lines 16 – 24). Regarding claim 16, Beck teach that free alkalinity is determined in the step of determining alkalinity (col. 14, lines 5 – 34). Regarding claim 17, Beck et al. teach that total alkalinity, or reaction product (RP), is determined in the step of determining alkalinity. Total alkalinity is generally defined as a measurement of a cleaning bath's total concentration of active materials as well as contaminants. Beck et al. teaches that an RP value of 1 is equivalent to 95 ppm of aluminum (col. 14, lines 5 – 34). Regarding claims 18 and 19, Beck et al. teach the step of determining alkalinity comprises titrating the sample by addition of an acid (col. 14, lines 5 – 16; col. 20, lines 50 – 56). Regarding claims 20 and 27, Surjaatmadja et al. teach outputting the result of step (b) above using a graphics output (42) (col. 3, lines 1 – 11). It would have been obvious to one of ordinary skill in the art to include the step of outputting the results of the titration process in order to facilitate ease of interpretation of the results. Regarding claims 21 and 24, Surjaatmadja et al. teach

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the use of a computer (40), which can be used for process control and data storage (col. 3, lines 1 – 11). It would have been obvious to one of ordinary skill in the art to store the results of the titration process in order to monitor the process. It would have been obvious to one of ordinary skill in the art to include the step of inputting an external request using a computer to initiate the steps comprising the titration process in order to provide control for the titration process. Regarding claims 22, 23, 26 and 28, Surjaatmadja et al. teach that the automatic titration apparatus may be used to automatically repeat the titration process in a continuous mode (col. 4, lines 1 – 24; col. 4, lines 40 – 45). It would have been obvious to one of ordinary skill in the art to automatically repeat the steps comprising the titration process in order to effectively monitor and control the cleaning bath process. It would have been obvious to include the step of adjusting the duration of the specified time interval based on a comparison of the results of step (b) on consecutively drawn samples in order to effectively monitor and control the cleaning bath process. It would have been obvious to one of ordinary skill in the art to repeat the titration steps after a specified time interval and the step of determining the alkalinity of one or more standard solutions is initiated if the result if the results of step (b) on two consecutively drawn samples differs by a preselected values in order to effectively monitor and control the cleaning bath process. It would have been obvious to one of ordinary skill in the art to repeat the titration steps automatically after a specified time interval and to further include the steps of either: analyzing the results of a plurality of alkalinity determinations; automatically termination the process; activating a detectable signal; or adjusting the operation of a measuring device, in order

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to prove for effective monitoring and control of the cleaning bath process. Regarding claim 29, Surjaatmadja et al. teach the use of pH probes, such as pH-sensitive electrodes (col. 1, lines 11 – 51). It would have been obvious to one of ordinary skill in the art to include the use of a pH-sensitive electrode in the titration process in determining alkalinity, which are well known in the art. Regarding claim 30, Surjaatmadja et al. teach the use of electromagnetic radiation (col. 3, lines 26 – 38). Regarding claim 31, Surjaatmadja et al. teach the use of a color detector (60) (col. 3, lines 26 – 38). It would have been obvious to one of ordinary skill in the art to include monitoring the color changes during the titration process in order to effectively monitor and control the cleaning bath process. Regarding claim 32, Beck et al. teach that 0.10 N sulfuric acid reagent is used in the titration process (col. 14, lines 5 – 16). Regarding claim 33, Beck et al. teach the step of activating a detectable signal in response to a determination of a preselected level of one or more reagents (col. 14, lines 5 – 34). Regarding claim 34, Surjaatmadja et al. teach that the result of step (b) above may be transmitted to a remote location from a field location (col. 3, lines 1 – 11 & 39 – 50). It would have been obvious to one of ordinary skill in the art to further include transmitting the result of step (b) to a remote location in order to effectively monitor and control a plurality of cleaning bath processes. Regarding claim 35, Beck et al. teach the step of adding one or more pH-adjusting components into the cleaning bath in response to the result of step (b) above being a preselected value (col. 12, lines 41 – 53; col. 16, lines 25 – 55).

Response to Arguments

Applicant's arguments filed 4/21/2003 have been fully considered but they are not persuasive. Applicant's arguments are not commensurate in scope to the claims. Beck et al. do teach the application of the free alkalinity determination process to alkaline cleaning baths (see col. 14, lines 5 – 60). Beck et al. do teach that the baths contain a phosphate ester anionic surfactant (see col. 6, lines 7 – 14; col. 14, lines 36 – 60). What does the applicant consider a “replenishing component”? Beck et al. do teach that “replenishing chemicals” are provided during the process (see col. 3, lines 15 – 37). Beck et al. do teach that the pH of the bath is further adjusted by the addition of sulfuric acid (see col. 15, lines 65 – 68; col. 16, lines 1 – 9). Beck et al. do teach the step of “adding one or more replenishing components to the cleaning bath if the alkalinity of the sample is below a preset value.” Beck et al. teach that the solution which remains after the extraction of the contaminants may be deficient in one or more chemicals normally used in the alkaline cleaner solution. In such instances, it is desirable that any deficiency in chemical content be replenished prior to reuse of the solution (see col. 20, lines 13 – 34). The RP value is derived from the determination of the free alkalinity (FA) value. Used cleaning baths have a high RP value due to the high content of dissolved metal (see col. 14, lines 5 – 35). If the RP value is below a preset value, i.e., there is little dissolved metal in the cleaning bath and therefore the cleaning process is not complete, more alkaline cleaner can then be added to complete the cleaning process. Beck et al teach that the alkaline cleaning solution can be added and replenished during the process as necessary (see col. 4, lines 51 – 57).

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In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the reference to Surjaatmadja et al. is merely used to provide a teaching of an automatic titration process of which one of ordinary skill in the art would have been apprised of. Surjaatmadja et al. do teach an apparatus and method for automatic titration. Therefore, it would have been obvious to incorporate the automatic titration method and apparatus, as taught by Surjaatmadja et al., with the alkalinity determination process, as taught by Beck et al., since the Courts have held that to provide a mechanical or automatic means to replace manual activity, which accomplishes the same result, is within the ambit of one of ordinary skill in the art. See *In re Venner*, 120 USPQ 192 (CCPA 1958). The applicant provides no specific arguments as to the applicability of the case law regarding *In re Venner* to the teachings of Beck et al. in view of Surjaatmadja et al. Although the teachings of Beck et al. in view of Surjaatmadja et al. perhaps may not be what the applicant intends as the claimed invention, the breadth in the scope of the claims encompass those teachings, and thereby do not *exclude* those teachings.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines whose telephone number is (703) 305-0401. The examiner can normally be reached on Monday - Friday (11:30 AM - 8 PM EST).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

BJS

June 30, 2003


Jill Warden
Supervisory Patent Examiner
Technology Center 1700